



Africa Physical and Cultural Geography Project

Activity 2

Instructions for Students

Goal: Understand the interrelationships among characteristics of the physical *and human* environment of Africa.



Step 1. Open the ArcView project you saved in the Africa Activity 1 lesson by starting ArcView and using File--> Open Project.

Step 2. The project opens with its exact appearance as of the last time you saved it. Open the "Relief" view by double-clicking on it if it doesn't automatically come up when you open your project.

Select "Add Theme" with the  tool. Locate the data in the folder where your data is saved.

Click on the "cities.shp" theme and "add" it to your view. Make the cities theme visible by checking the box.

Step 3. Double click on the cities.shp theme to access the Legend Editor. Under Legend Type, select "Graduated Symbol." Under Classification Field, select "Population." Double-click on the symbol box in the lower left-hand corner. Change color to a light blue and click on

the circle with a dot in it. Change the size range of your cities symbols (lower right corner) from 2 to 24. Click "Apply." Close Legend Editor and Marker Palette.


Step 4. Answer these questions:

A) In which relief area are the largest number of cities located? Why?

B) In which relief area are the fewest number of cities located? Why?

C) How does proximity to water determine city size? Explain.

Step 5. The real power of GIS is to be able to answer geographic questions. We will take through a simple query to find the cities with the largest populations in Africa.

First, click on the hammer and question mark symbol located on the tool bar (). Double-click on population and then click on the greater than (">") symbol. Next, go to the values column and scroll down to 3000000 and double-click on it. Click on "New Set." Notice that the selected cities now appear in yellow. These are the cities with a population over 3,000,000.

Step 6. Close query box. Use the Info Tool  to click on the highlighted cities one by one. Identify the cities by name and population. List them below.

Step 7. Repeat steps 2 and 3 but this time using the "Precip" view you had previously made.

If you don't have the Precip view, create it with directions in the previous assignment.

Step 8. Answer these questions:

- A) In which precipitation area are the least number of cities located?

- B) Can you explain the location of the 2 large cities in North Africa that are in the lowest precipitation range?

Step 9. Keep the relief view open. Go to the project window, Views, and double-click on "Climate" to open the view.

Step 10. Make the relief view active by clicking on that window. Select the "cities.shp" theme. Go to Edit, then "Copy Theme." Activate the climate view. Go to Edit on the menu bar and select the Paste button. The cities theme should appear in your climate view until you turn them off.

Step 11. Answer this question:

- A) Does climate have an effect on city size? What is this effect?

Step 12. If you have time, create a layout and print any of your maps.

Save your project, and Exit ArcView.

***** End of Activity 2 *****

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URL:<http://rockyweb.cr.usgs.gov/outreach/africa/act2.html>

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